

## Intimate partner violence among military veterans and active duty servicemen

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### Abstract

Intimate partner violence (IPV) is a serious public health problem that has received increased attention in the military. We review existing literature regarding prevalence, consequences, correlates, and treatment of IPV perpetration among military veterans and active duty servicemen. Rates of IPV across these military populations range from 13.5% to 58%, with considerably lower rates obtained among samples not selected on the basis of psychopathology. For both military veterans and active duty servicemen, IPV results in significant victim injury and negative child outcomes, and problematic substance use, depression, and antisocial characteristics represent psychiatric correlates of IPV perpetration. For veterans, posttraumatic stress disorder also is an important correlate that largely accounts for the relationship between combat exposure and IPV perpetration. Additional correlates include military service factors, relationship adjustment, childhood trauma, and demographic factors. The only experimentally controlled IPV treatment study indicates that standard treatments are ineffective for active duty servicemen. Further research is needed to advance the development of etiological models of IPV among military populations, to determine whether such models necessarily differ from those developed among civilians, and to rigorously test IPV interventions tailored to the specific characteristics of these individuals.

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Intimate partner violence (IPV) is a serious national public health problem. Approximately 12% of couples in the United States report male-to-female violence each year (Straus & Gelles, 1990), and recent national surveys indicate that 1.3 million women are physically assaulted by an intimate male partner annually, with nearly half of these victims reporting injury (Centers for Disease Control and Prevention, 2003; Tjaden & Thoennes, 1998). IPV is related to an increased frequency of physician and emergency room visits (Bergman & Brismar, 1991; McLeer & Anwar, 1989; Plichta, 1992), as well as a wide variety of negative health consequences, including death (Campbell, 2002; Campbell et al., 2002; Coker et al., 2002; Coker, Smith, Bethea, King, & McKeown, 2000; Eisenstat & Bancroft, 1999; Greenfeld et al., 1998; Sutherland, Sullivan, & Bybee, 2001). Furthermore, the yearly cost of direct medical and mental health care to victims of IPV has been estimated at \$4.1 billion (Centers for Disease Control and Prevention, 2003), irrespective of indirect costs such as loss of work and decreased productivity.

IPV has only been recognized as a serious public health issue since the 1970s, resulting in a currently underdeveloped research base in both civilian and military populations. Interest in the difficulties faced by military families has increased in recent years due in part to the well-publicized 2002 domestic homicides at Fort Bragg, North Carolina among Special Forces units who served in Afghanistan. Given that 26.4 million veterans reside in the United States (United States Census Bureau, 2003), and the total United States military force is currently comprised of over 1.4 million active duty personnel, of which 52% are married and 85% are male (Department of Defense, 2004), a better understanding of IPV perpetration among active duty servicemen and military veterans is a necessity. Due to the unique stressors and training experienced by these individuals, it should not be assumed that the prevalence and correlates of IPV are invariant across civilians, veterans, and active duty military servicemen (Taft et al., 2005).

As no systematic literature reviews have previously been conducted regarding IPV perpetration among active duty servicemen and veterans, the current paper aims to characterize the established information on the topic and reveal areas in need of further inquiry. We begin by summarizing available evidence regarding the prevalence and consequences of IPV among these populations. Next, correlates of IPV and potential etiological variables are reviewed, followed by a discussion of IPV interventions for these individuals and suggestions for future research. Our focus is on male-perpetrated IPV due to the dearth of research in the area of female-perpetrated IPV among the populations of interest. For the purposes of this review, IPV is defined as a physical assault committed by a spouse, ex-spouse, or current or former boyfriend. Given inherent differences between active duty military servicemen and veterans, this review distinguishes between these two groups. The term “active duty military servicemen” refers to men who are on full-time duty in the active United States military, and the term “veterans” refers to men who have served and been separated from any branch of the armed forces.

## 1. Identification of studies for review

Articles examining IPV perpetration by military servicemen or veterans were identified by searching MEDLINE, PsycINFO, the Published International Literature on Traumatic Stress (PILOTS) database, and the Educational Resources Information Center (ERIC) database. Search terms included: *combat* and *violen\**, *combat* and *batter\**, *combat* and *abus\**, *combat* and *assault\**, and *combat* and *aggress\**. These searches were repeated with the words *war zone*, *warzone*, *veteran*, and *military* replacing the term *combat*. Searches were limited to articles published in January 1970 to February 2005, inclusive, due to

the lack of research attention to IPV prior to that time. Articles were excluded if they did not report an empirical investigation, or if the article reported a study utilizing a sample of less than five participants. In addition to the examination of electronic databases, the references of all retrieved articles were reviewed to identify additional relevant investigations.

In total, these procedures yielded 64 published reports. The authors independently inspected all 64 articles to ensure that they adhered to the above guidelines. After review, two were eliminated because they examined general (non-intimate partner) violence only. Nine articles did not report quantitative findings, three articles focused only on methodological issues, one article focused on female-perpetrated IPV only, and one article reported on Army medical personnel's perceptions of IPV in the military. Of the remaining 48 articles from which quantitative data was extracted, 24 focused on documenting the prevalence, consequences, and/or correlates of IPV among active duty military servicemen, 13 addressed these areas among veterans, and one reported on joint samples of active duty servicemen and veterans. An additional six articles focused on treatment for IPV perpetration among active duty servicemen, one focused on this topic in a veteran sample, and three reported on joint treatment samples of active duty servicemen and veterans.

Given the limited number of studies examining the topic of interest, all obtained articles are included in this review, regardless of methodological rigor. Inclusion of all available studies is intended to provide an overview of the domains of research previously addressed, to illuminate those domains with little or no previous empirical attention, and to serve as a comprehensive reference. Where appropriate, methodological limitations are highlighted.

## 2. Prevalence of IPV

Prevalence rates of IPV perpetration among active duty servicemen and veterans vary widely, with rates ranging from 13.5% to 58%. As in all IPV research, accuracy of these rates across studies may depend upon several factors such as the assessment measure used, the time period assessed, and inclusion of partners' reports. Further, the possible overrepresentation of specific forms of psychopathology, such as posttraumatic stress disorder (PTSD) and substance dependence, in some military samples is likely associated with inflated rates of IPV perpetration. Studies using military samples not selected on the basis of psychopathology have found IPV perpetration rates that are approximately one to three times higher than rates found among representative studies of the general population (e.g., Straus & Gelles, 1990).

### 2.1. Active duty servicemen

Studies reporting rates of IPV perpetration among active duty servicemen are presented in Table 1. In a sample of active duty Army servicemen and their wives that was representative of Army rank and race distributions and standardized to match civilian demographics, 13.3% of the men and 17.5% of the women reported past year moderate (i.e., threw something that could hurt; pushed, grabbed, or shoved; slapped; kicked, bit, or hit with a fist) to severe (beat up; choked; threatened with a knife or gun; used a knife or gun) husband violence (Heyman & Neidig, 1999). Compared to demographically matched civilian wives, wives of Army servicemen reported significantly higher rates of moderate husband-to-wife violence (13.1% vs. 10.0%) and severe husband-to-wife violence (4.4% vs. 2.0%). The rate of

Table 1  
Rates of IPV perpetration among active duty servicemen

Study	Participants	Source	Military service	Marital status	Reporter of IPV	IPV Measure	Time frame	Rate
Heyman & Neidig, 1999	<i>n</i> =27,502	Nationwide random sample; 1990–1994	Army	Married	Self	CTS	Past year	13.3%
Pan et al., 1994b	<i>n</i> =2537 <i>N</i> =15,023	Nationwide random sample; Caucasian; 1989–1992	Army	Cohabiting	Partner Self	MCTS	Past year	17.5% 30%
Rosen, Knudson et al., 2002; Rosen et al., 2002a, 2002b	<i>N</i> =716	Fort A cohort	Army	Married	Self	MCTS	Past year	32%
Bohannon et al., 1995	<i>N</i> =94	Volunteers at one military base	Not available	Married	Combined	CTS	Past year	47%

MCTS=Modified Conflict Tactics Scale (Pan, Neidig, & O'Leary, 1994a); CTS=Conflict Tactics Scale (Straus, 1979). Combined reports are an aggregate of both partners' reports of male-perpetrated IPV.

moderate husband-to-wife violence reported by Army servicemen was comparable to that of men in the civilian sample (10.8% vs. 9.9%, respectively) and these servicemen reported a significantly higher rate of severe husband-to-wife violence than the civilian men (2.5% vs. 0.7%). In a representative sample of Caucasian men enlisted in the Army, 30% reported perpetrating IPV during the past year (Pan, Neidig, & O'Leary, 1994b). Similarly, a rate of 32% was found in a representative sample of active duty, primarily enlisted, Army servicemen (Rosen, Knudson et al., 2002; Rosen, Parmley, Knudson, & Fancher, 2002a, 2002b). Using both spouses' reports among a relatively small convenience sample of married active duty couples, over half of whom were officers, 47% of the women were found to have experienced past year husband violence (Bohannon, Dosser, & Lindley, 1995). As outlined in Table 1, as sample size increases and demographic representation is maintained, prevalence estimates tend to be lower.

## 2.2. Veterans

Studies reporting rates of veterans' IPV perpetration are presented in Table 2. Examination of data provided by the partners of veterans participating in the nationally representative National Vietnam Veterans Readjustment Study (NVVRS; Kulka et al., 1990) indicated that an estimated 13.5% of veterans without PTSD perpetrated IPV during the past year, while an estimated 33% of veterans with PTSD perpetrated past year IPV (Jordan et al., 1992). Non-representative convenience samples of veterans have yielded higher prevalence rates. Among men in a VA inpatient alcohol treatment program, 39% reported perpetrating IPV during the past year (Gondolf & Foster, 1991). Similarly, using an aggregate of both partners' reports, 42% of a convenience sample of Vietnam veterans and their spouses reported male-to-female IPV during the past year (Byrne & Riggs, 1996). Using a longer reporting period, 54% of a sample of VA psychiatric and chemical dependence inpatients reported perpetrating IPV against their current partner at some time during their relationship (Petrick, Rosenberg, & Watson, 1983). Finally, in a study of Vietnam combat veterans admitted to a VA PTSD inpatient treatment unit,

Table 2  
Rates of IPV perpetration among veterans

Study	Participants	Source	Military service	Marital status	Reporter of IPV	IPV Measure	Time frame	Rate
Jordan et al., 1992	<i>n</i> = 252	NVVRS (without PTSD)	Vietnam theater	Married or cohabitating	Partner	CTS	Past year	13.5%
	<i>n</i> = 122	NVVRS (with PTSD)	Vietnam theater	Married or cohabitating	Partner	CTS	Past year	33%
Gondolf & Foster, 1991	<i>N</i> = 218	Alcohol dependent inpatients	Vietnam era	63% in a relationship	Self	CTS	Past year	39%
Byrne & Riggs, 1996	<i>N</i> = 50	Volunteers; 95% with direct combat exposure	Vietnam theater	Married or cohabitating	Combined	CTS	Past year	42%
Petrick et al., 1983	<i>N</i> = 101	Psychiatric and substance dependence inpatients	Vietnam era	Married or cohabitating	Self	Unpublished measure	Lifetime	54%
Hiley-Young et al., 1995	<i>N</i> = 177	PTSD inpatients	Vietnam theater	45% divorced	Self	Unpublished measure	Since military discharge	58%

NVVRS=National Vietnam Veterans Readjustment Study (Kulka et al., 1990); PTSD=posttraumatic stress disorder; CTS=Conflict Tactics Scale (Straus, 1979). Vietnam era service refers to active duty service between August 5, 1964 and May 7, 1975, anywhere in the world. Vietnam theater service refers to active duty service between August 5, 1964 and May 7, 1975 in Vietnam or the surrounding water/air space. Combined reports are an aggregate of both partners' reports of male-perpetrated IPV. Marital status was based on participants' current status at the time of assessment.

58% reported perpetrating IPV since their discharge from the military (Hiley-Young, Blake, Abueg, Rozyanko, & Gusman, 1995).

### 3. Consequences of intimate partner violence

Although relatively little systematic research has been conducted on the effects of IPV perpetration among active duty servicemen and veterans, it is clear that IPV has far reaching consequences. These effects appear to be similar to the types of consequences suffered among civilian samples; however, the severity and types of consequences have not been directly compared between military and civilian samples.

#### 3.1. Active duty servicemen

Among a sample of couples entering an active duty military treatment program for husbands' perpetration of IPV, 60% of wives reported being physically injured as a result of their husbands' violence, and IPV severity was significantly related to wife injury (Cantos, Neidig, & O'Leary, 1994). Regarding the effects of IPV on children, Milner and Gold (1986) reported that active duty servicemen who had perpetrated IPV were significantly more likely to demonstrate elevated child abuse potential scores than nonviolent servicemen. In addition, a substantiated report of child abuse has been found to be

twice as likely to occur among families experiencing IPV than among other military families (Rumm, Cummings, Krauss, Bell, & Rivara, 2000).

### *3.2. Veterans*

Gerlock (1999) examined the health impact of IPV among a sample consisting primarily of veterans entering an IPV treatment program and their female partners. Consistent with patterns of injuries reported among civilian samples (Centers for Disease Control and Prevention, 2003; Tjaden & Thoennes, 1998), partners reported musculoskeletal problems, cardiovascular problems, lacerations, and bruises related to IPV. Other studies of the partners of combat veterans with PTSD have shown that experiencing IPV is associated with psychological maladjustment, including depression, anxiety, and somatic symptoms (Nelson & Wright, 1996; Street, King, King, & Riggs, 2003). Veterans' perpetration of IPV has also been correlated with lower parenting satisfaction, as well as poorer academic performance and social competence, and increased aggression, hostility, and behavioral problems among the children exposed to the abuse (Jordan et al., 1992; Rosenheck & Fontana, 1998; Ruscio, Weathers, King, & King, 2002; Samper, Taft, King, & King, 2004).

## **4. Correlates of IPV perpetration**

Studies examining the correlates and potential risk factors for IPV perpetration have been limited by a reliance on cross-sectional designs and a lack of investigation into more explanatory etiological models for IPV. Currently, the correlates of IPV perpetration that have been examined among active duty servicemen and veterans can be categorized into five groups: psychopathology variables, childhood trauma variables, military service factors, relationship adjustment, and demographic factors.

### *4.1. Active duty servicemen*

#### *4.1.1. Psychopathology variables*

Existing research suggests that alcohol and substance use among active duty servicemen is associated with an increased risk of perpetrating IPV. Problematic alcohol and drug use is more prevalent among active duty Army servicemen in treatment for IPV perpetration relative to nonviolent Army servicemen (Hurlbert, Whittaker, & Munoz, 1991; Pan et al., 1994b). Alcohol problem severity has also been associated with frequency of IPV perpetration among married Army soldiers participating in the Fort A cohort, which surveyed over 1000 active duty servicemen at an Alaskan base (Rosen et al., 2002b), as well as severity of IPV perpetration among Air Force servicemen with substantiated Family Advocacy Program (FAP) IPV cases (Brewster, Milner, Mollerstrom, Saha, & Harris, 2002). Researchers utilizing Air Force FAP data and data from the Army Central Registry, a centralized database of all reported family violence incidents in this military branch, have reported that approximately 20% of IPV incidents were preceded by alcohol consumption, although alcohol use information was unavailable for a large number of cases (Brewster et al., 2002; McCarroll et al., 1999).

As for other psychopathology correlates, Pan et al. (1994b) found more depressive symptoms among partner violent Army soldiers, compared to those who were nonviolent. In separate studies using Fort A cohort data, depression severity (Rosen, Kaminski, Parmley, Knudson, & Fancher, 2003) and antisocial

personality trait frequency (Rosen et al., 2002b) were associated with IPV perpetration frequency. Other personality (authoritarianism) and attitudinal (attitudes towards women, empathy) features did not distinguish IPV perpetrators from nonviolent controls in a sample of law enforcement-referred active duty servicemen (Neidig, Friedman, & Collins, 1986). Low self-esteem and low expectations for interactions with others were the only discriminating variables in this study.

#### *4.1.2. Childhood trauma variables*

Family of origin violence has been frequently reported among perpetrators of IPV. In a sample of partner violent Navy servicemen, 39% of the men reported witnessing interparental violence as children (Wasileski, Callaghan-Chaffee, & Chaffee, 1982). In addition, among IPV perpetrators identified by the Air Force and Navy FAPs, 11% and 25%, respectively, reported being physically and/or emotionally abused by a parent (Brewster et al., 2002; Wasileski et al., 1982), and a higher rate (49%) was found among a sample of treatment-mandated active duty servicemen (Langhinrichsen-Rohling, Neidig, & Thorn, 1995). A positive correlation between frequency of childhood victimization and IPV perpetration has also been documented in a study of the Fort A cohort (Rosen et al., 2002b).

#### *4.1.3. Military service factors*

In a study of IPV perpetration in the 3 months after Army servicemen's return from deployment to Bosnia, a group of deployed military servicemen did not perpetrate significantly more IPV than a non-deployed comparison sample (McCarroll et al., 2003). However, in an Army-wide study including over 20,000 participants, length of deployment was positively correlated with the severity of self-reported IPV perpetration in the year after deployment (McCarroll et al., 2000). There is also some evidence indicating that IPV perpetration is more frequent among enlisted, low-ranking military servicemen than among officers (Cantos et al., 1994; Rosen et al., 2003; Wasileski et al., 1982).

#### *4.1.4. Relationship adjustment*

Although a temporal or etiological relationship has not been examined, in two separate Army samples, partner violent servicemen reported lower relationship adjustment and satisfaction than those who were not partner violent (Pan et al., 1994b; Hurlbert et al., 1991). Army servicemen's level of marital adjustment has also been found to be negatively associated with the frequency of IPV perpetration (Rosen et al., 2003).

#### *4.1.5. Demographic factors*

Without controlling for potentially confounding variables (e.g., socioeconomic status), findings among large samples of Army servicemen suggest that IPV perpetration is more prevalent among non-Caucasian than Caucasian servicemen, and is negatively associated with age (McCarroll et al., 2003; Newby et al., 2000; Pan et al., 1994b; Rosen et al., 2002a).

### *4.2. Veterans*

#### *4.2.1. Psychopathology variables*

Similar to research conducted among active duty servicemen, relationships between IPV perpetration and alcohol and substance use disorders and depressive symptomatology have been studied among veterans. Positive direct relationships have been found between frequency of IPV perpetration and

alcohol abuse/dependence diagnoses, as well as quantity and frequency of alcohol consumption among NVVRS participants (Samper et al., 2004; Savarese, Suvak, King, & King, 2001). In a clinical sample of IPV perpetrators, 45% of participants were diagnosed with a current substance abuse disorder, and 61% underwent substance abuse treatment during their lifetime. In addition, 27% of participants were diagnosed with a mood disorder, and perpetrators of IPV evidenced significantly more depressive symptoms than a nonviolent group (Gerlock, 1999).

Although PTSD has not been examined as a correlate of IPV perpetration among active duty servicemen, a relatively large amount of research has established that a relationship exists among veterans. Higher rates of IPV perpetration have been found among veterans with PTSD relative to those without the disorder (Carroll, Rueger, Foy, & Donahoe, 1985; Jordan et al., 1992). In addition, positive associations have been reported between measures of PTSD symptom severity and IPV severity (Samper et al., 2004), even when considered together with other IPV risk factors (Byrne & Riggs, 1996; Orcutt, King, & King, 2003). Further, some evidence suggests that comorbid psychopathology plays a role in IPV perpetration among veterans reporting PTSD symptomatology. For example, among veterans participating in the NVVRS (Kulka et al., 1990), alcohol consumption and PTSD hyperarousal symptoms jointly predicted IPV perpetration, such that alcohol consumption appeared to potentiate the impact of PTSD hyperarousal symptoms on IPV perpetration (Savarese et al., 2001). Also among NVVRS participants, major depressive episode and drug abuse/dependence diagnoses were higher among partner violent veterans with PTSD than nonviolent veterans with the disorder (Taft et al., 2005), suggestive of an added risk associated with these comorbid diagnoses.

With respect to personality correlates of IPV perpetration among veterans, antisocial and narcissistic features have received the most attention. In a sample of Vietnam veterans, antisocial behavior was directly related to a marital adversity variable that included IPV perpetration (Gimbel & Booth, 1994). In addition, a cluster analysis of the Millon Clinical Multiaxial Inventory-II (Millon, 1987) among a sample of veterans entering IPV treatment yielded three perpetrator subtypes that were characterized by elevated narcissistic and antisocial personality characteristics (Rothschild, Dimson, Storaasli, & Clapp, 1997).

#### *4.2.2. Childhood trauma variables*

In contrast to research conducted among active duty servicemen, researchers have not found direct relationships between family of origin violence and IPV perpetration among veterans (Hiley-Young et al., 1995), and these variables have not distinguished partner violent and nonviolent veterans with PTSD (Taft et al., 2005).

#### *4.2.3. Military service factors*

Among veterans' military service variables, exposure to combat has been the most frequently examined correlate of IPV perpetration. Combat exposure has been associated with IPV perpetration in some studies, though this relationship is largely accounted for by PTSD symptoms (Byrne & Riggs, 1996; Carroll et al., 1985; Orcutt et al., 2003; Prigerson, Maciejewski, & Rosenheck, 2002). Interestingly, using structural equation modeling on NVVRS data (Kulka et al., 1990), a significant negative direct association between combat exposure and partner aggression was found when controlling for PTSD symptoms (Orcutt et al., 2003). That is, once PTSD symptomatology was taken into account, those who engaged in higher levels of combat were less likely to engage in partner aggression. In other analyses, however, indirect associations in the expected direction were found between combat exposure and IPV through perceived threat in the warzone and PTSD. Also using NVVRS data, exposure to



atrocities has distinguished PTSD-positive partner violent from nonviolent veterans (Taft et al., 2005), and participation in killing has been shown to predict the occurrence of post-war IPV perpetration among PTSD inpatients (Hiley-Young et al., 1995).

#### *4.2.4. Relationship adjustment*

A combined self- and partner-reported measure of relationship problems has been found to be strongly associated with overall physical and psychological relationship aggression among a convenience sample of Vietnam veterans. Further, relationship problems significantly accounted for the association between PTSD symptoms and relationship aggression (Byrne & Riggs, 1996). Marital adjustment has also distinguished veterans with PTSD who have perpetrated IPV from those who have not (Taft et al., 2005).

#### *4.2.5. Demographic factors*

In the only study that investigated demographic correlates of IPV perpetration among veterans, younger age was found to be associated with higher IPV perpetration among a sample of psychiatric and substance abuse inpatients (Petrick et al., 1983).

### **5. Treatment of intimate partner violence perpetration**

Currently, the only empirically evaluated interventions for IPV in the military include treatment programs for previously identified perpetrators. Prevention programs and strategies for identifying perpetrators have not been examined. Evaluated treatment programs have included a broad range of therapies, and have been based primarily on feminist and cognitive behavioral principles and ideologies. Several studies have included extensive follow-up periods, but only one study has employed an experimental control group, and no studies have examined differential effectiveness among military personnel and civilians.

#### *5.1. Active duty servicemen*

The Department of Defense has established FAPs that, regardless of branch of service, include prevention, identification and reporting, assessment, command involvement, coordination with local law enforcement, treatment, and follow-up services. The most frequently recommended treatments include individual therapy, anger management training, domestic conflict containment programs, and marital therapy (Brewster et al., 2002; Mollerstrom, Patchner, & Milner, 1992). An evaluation of overall FAP services among 2991 male and female IPV perpetrators stationed on 88 Air Force bases worldwide indicated that clinicians rated FAP participants as less at risk for abusive behavior after completing the program (Brewster et al., 2002). Participants were also found to exhibit less family conflict, more family cohesion and expression, greater marital satisfaction, and decreased risk of child abuse. These changes remained stable over the course of a follow-up period averaging 213 days. Unfortunately, behavioral data regarding re-offense rates are not available.

The Domestic Conflict Containment Program (Neidig, 1986; Neidig, Friedman, & Collins, 1985) was developed specifically for use in the military. It includes 10 weekly 2-h structured skills-based sessions stemming from social learning and cognitive restructuring principles and focusing on effective

relationship skills, anger management strategies, increasing perpetrators' sense of responsibility and self-control, and issues regarding the impact of work-related stressors on relationships. Perpetrators are ordered to attend and spouses are strongly encouraged. Through examination of official reports and follow-up telephone calls to spouses, it was concluded that 87% of husbands remained IPV-free for a 4-month period after the program (Neidig et al., 1985). In addition, from pretreatment to posttreatment, husbands' ratings of dyadic adjustment and locus of control changed significantly in the direction of nonviolent norms (Neidig, 1986).

Only one experimentally controlled evaluation of IPV treatment effectiveness has been conducted in a military setting. Among a large sample of married United States Navy couples in which the husband perpetrated IPV, Dunford (2000) found that none of the randomly-assigned year-long treatment modalities (i.e., a cognitive-behavioral men's group, a cognitive-behavioral couples group, and a rigorously monitored group) was effective in reducing IPV at 6 and 12 months posttreatment compared to a no-treatment control group. An analysis of a sub-sample of African American men who participated in the study indicated that the treatments were most effective among men with higher self-esteem and family supports (Jones, 2002).

### 5.2. *Veterans*

A feminist-oriented 6-month weekly outpatient IPV treatment program emphasizing reductions in shame and desire for power and control was evaluated among a sample of primarily court-ordered male veterans (Petrik, Gildersleeve-High, McEllistrem, & Subotnik, 1994). According to veteran and partner reports, veterans were significantly less psychologically and physically abusive after the treatment, and these gains were maintained at 6 months and 2 years posttreatment. However, according to the partners, veterans who did not complete follow-up assessments did not show a significant decrease in abusiveness between pretreatment and posttreatment, and they were significantly more abusive at posttreatment than the men who completed follow-up assessments, suggesting the inflation of success rates due to systematic attrition.

A similar feminist-oriented IPV treatment program was evaluated among a sample consisting primarily of veterans. Only 37% of the men successfully completed the program, defined as refraining from physical and psychological aggression according to self- and victim reports, as well as remaining drug and alcohol free, remaining compliant with court orders, and completing a minimum of 7 months of treatment, including homework assignments. Compared to non-completers, completers reported lower symptoms of stress and PTSD and higher relationship mutuality. Those who completed the program were also younger, more likely to be employed, and more likely to be court-monitored or court-ordered to treatment (Gerlock, 2001a,b, 2004).

## 6. **Conclusions**

Differences in IPV prevalence rates vary considerably across studies, and depend in part upon whether the data are obtained from representative versus non-representative samples, and according to differences in psychopathology across samples. Based on available representative studies, rates of IPV perpetration among military veterans and active duty servicemen are up to three times higher than those found among civilian samples. Further, the data indicate that IPV among military veterans causes

significant victim injury, and is associated with a range of negative child outcomes. At this time, relatively little research has been conducted regarding the consequences of IPV among active duty servicemen, but the existing evidence suggests that IPV may have similar detrimental effects among this population.

Despite high prevalence rates and the deleterious consequences of IPV, each year less than 1% of active duty Army servicemen are officially identified and substantiated as perpetrators through the United States Army's Central Registry, thus leading to a referral to FAPs (McCarroll et al., 1999). We are not aware of any available comparable data for IPV perpetration within other branches of the military. Further, no formal mechanism exists for identifying IPV among military veterans. Therefore, medical and behavioral health professionals may represent the first line of defense in recognizing victims and perpetrators of IPV in military settings, and in linking these individuals with appropriate services (Brannen, Bradshaw, Hamlin, Fogarty, & Colligan, 1999; Miller & Veltkamp, 1993). It is critical that these treatment providers be educated on the risk markers, correlates, and effects of IPV perpetration among the population being served.

For both active duty servicemen and veterans, substance use, depression, and antisocial characteristics represent important correlates of IPV perpetration. For veterans, PTSD symptomatology also represents a robust correlate of IPV, PTSD symptoms largely account for the relationship between warzone stressors and IPV, and PTSD comorbidity is associated with IPV. Such findings suggest that interventions targeting PTSD in particular may serve to ameliorate the effects of military stressor exposure on IPV perpetration. However, no research has examined PTSD or Acute Stress Disorder as correlates of IPV among active duty servicemen. Several other potential psychiatric correlates also deserve further attention. For example, although researchers have suggested that borderline personality disorder characteristics may be common among veterans who perpetrate IPV (Rothschild et al., 1997), and despite their consistent relationship with IPV among civilians (Dutton, 1995; Hamberger & Hastings, 1991), no studies have directly examined associations between these traits and IPV in active duty or veteran populations.

Similar to a number of studies among civilian samples (Coleman & Straus, 1990; Hotaling & Sugarman, 1990; Leonard & Senchak, 1996; O'Leary, Malone, & Tyree, 1994; Riggs, 1993), poor marital and relationship adjustment has been strongly associated with increased risk for IPV perpetration among both active duty servicemen and veterans. Further, demographic factors linked with IPV perpetration among samples of veterans include younger age and minority status. However, it should be noted that these studies did not take socioeconomic variables into account when examining racial differences, which is problematic given findings from (non-military) nationally representative studies indicating that these factors largely account for such differences (Cazenave & Straus, 1990). These demographic factors may also be related to IPV perpetration through their relationship with other deployment-related stressors and correlates such as enlisted status, lower military rank, and deployment length.

Several studies among active duty servicemen have shown childhood trauma variables (i.e., child abuse and witnessing interparental violence) to confer risk for IPV perpetration in adulthood, consistent with the civilian IPV literature (Kalmus, 1984; Murphy, Meyer, & O'Leary, 1993; Widom, 1989). Such associations have not been found among samples of veterans, however, and it appears that warzone stressors (i.e., combat exposure, exposure to atrocities, and killing) may be more salient for IPV perpetration among this population. Future research should continue to explore potential differences in etiological factors for IPV perpetration across military veterans, active duty servicemen, and civilians.

Although some evidence suggests that interventions for IPV perpetration conducted in military settings decrease recidivism posttreatment, without the use of control group comparisons, conclusions regarding treatment effectiveness are limited. To date, the only available experimentally controlled study of IPV treatment in a military setting suggests that standard treatment modalities are not effective among active duty servicemen. The various etiological factors that appear to play a role in IPV perpetration among military servicemen may differentially impact treatment response. Dunford (2000) suggests that the interventions examined in his study may have failed because of a “one-size-fits-all” approach to treatment, and recommends that treatments be tailored to men’s different psychiatric needs. Such programs should also focus on decreasing stigma and other barriers to obtaining mental health treatment, increasing men’s motivation to change, and decreasing the significant treatment attrition observed among veterans.

A major limitation of the research involving veterans is that most studies in this area have examined Vietnam theater veterans’ current IPV perpetration. No studies have examined veterans’ level of IPV perpetration immediately before and after their tours in Vietnam, nor has information been gathered regarding more recent war veterans (e.g., Gulf War I veterans). Among active duty samples, the majority of studies, particularly those regarding the prevalence of IPV perpetration, have been conducted among Army servicemen. It has been suggested that differences in each branch’s culture, leadership styles, and mission may interact with other variables to differentially predict IPV (Rosen et al., 2003). Further, researchers should move beyond retrospective self-report methods and utilize experimental and laboratory paradigms that may illuminate mechanisms involved in IPV perpetration. Research regarding cognitive and emotional functioning (e.g., the role of anger and perceptions of threat in the relationship between PTSD and IPV perpetration) as well as situational correlates (e.g., job stress; couples’ interactional styles) may also prove fruitful.

IPV is a significant problem for current and former military servicemen that has serious consequences for victims, perpetrators, and families. Several population-specific correlates of IPV have been identified, but additional work is needed to further specify potential marker variables and risk factors for IPV, and to develop more explanatory etiological models for IPV. It is hoped that this work will also stimulate and inform more scientifically rigorous IPV intervention and prevention research, and ultimately enhance the health and functioning of military families.

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